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**HOW WHO WE FOLLOW INFLUENCES OUR INSTAGRAM
ADDICTION AND SELF-PRESENTATION ON THE APP**

Klara Helene Müller

NOVA Information Management School
Instituto Superior de Estatística e Gestão de Informação
Universidade Nova de Lisboa

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AND SELF-PRESENTATION ON THE APP**

by

Klara Helene Müller

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Advisor: Prof. Diego Costa Pinto

Co Advisor: Yasmina El Fassi

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ABSTRACT

As the number of Instagram users and the time spent on the application continues to rise, so does the occurrence of Instagram addiction. While prior research has identified the core motives and personality traits connected to this addiction, the effects of a users' following, have not been studied thus far. However, most of the time spent on the application, users browse through the posts of their followed accounts. Therefore, the current study analyzed the effects that the number and types of accounts, and the topics of their content, have on a users' level of Instagram addiction as well as their self-presentation on the application. The findings of the questionnaire ($N = 212$) revealed that the number of public accounts followed positively correlates with the level of Instagram addiction. Furthermore, users that primarily follow friends and acquaintances tend to present their real self, while followers of influencers and celebrities present a more ideal and fake version of themselves on Instagram. Thereby, the users' life-satisfaction and self-esteem have a moderating role on the effects on self-presentation. These findings provide useful insights to users and could act as a basis for public policy directed towards a healthier use of social networking sites.

KEYWORDS

Instagram; Following; Addiction; Self-presentation; Self-esteem

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1 INTRODUCTION

Ten years after the social media application “Instagram” was launched, the picture-based platform now recorded over one billion monthly active accounts (Instagram Business, 2020). Consequently, making it the third most popular social media platform, while the number of users continue to grow rapidly. Especially young people are using Instagram to share pictures and videos with their followers, as well as follow others’ posts and engage through comments and likes.

Instagram’s distinctiveness is the applications’ unique predominantly visual interface, making it a Social Networking Site (SNS) with a high prospect of intensive use (Mackson, Brochu, & Schneider, 2019). The core user group, aged between 18 and 30, use the application several times throughout the day, on average a total of 53 minutes (Ennis-O'Connor, 2019).

As Instagram gained popularity among users, academic literature on it expanded. Many research papers have analyzed the user’s motivations behind using the platform, and how exactly they engage with each other through the application (Huang & Su, 2018; Sheldon & Bryant, 2016). Furthermore, the causes and effects of extensive Instagram use, also referred to as Instagram addiction, have been analyzed (Kircaburun & Griffiths, 2018; Mackson, Brochu & Schneider, 2019).

Besides, users’ behavior on a variety of other social media platforms has been extensively studied and analyzed. A unique aspect that social media offers, is that users’ have full control about what and how much they share with their connections, allowing them to present themselves in whatever way they want. Naturally, this encourages users to present the most positive aspects of their life (Rosenberg & Egbert, 2011). However, the discrepancy between users’ offline- and online- self may still vary significantly. Therefore, Michikyan and colleagues (2014) distinguish between users presenting their real-, ideal- and false-self, which they have discovered to be dependent on personality traits such as neuroticism and extraversion.

However, most users only post a few times a week, which means that the rest of their time on Instagram, is spent browsing through the posts and profiles of the followed accounts. Notably, no prior research has investigated the effects of the accounts’ users follow and whose

content they consume on a daily, may have on their Instagram usage. This study aims to fill this gap through thorough descriptive and explanatory research.

The current research proposes that all this time spent browsing has an effect on the users' level of Instagram addiction, as well as one how they present themselves through their own posts. Meanwhile, what users see while scrolling through their newsfeed are primarily the posts of the accounts that they follow, suggesting that their experience on the app is significantly influenced by that metric. Therefore, this research analyzes the effects of the type of accounts and topic of content, users are following, on their level of Instagram addiction and self-presentation on the application. Specifically, six hypotheses are proposed and evaluated through a mixed-method approach. This involved, qualitative in-depth interviews and a quantitative survey analysis.

This research aims to contribute to the existing literature and offer further understanding of an application that plays a significant role in the lives of the majority of emerging adults. The results could offer deeper insights into the long-time effects that come from consuming different types and content of followed accounts. Thereby, offering propositions to who and what users should follow in order to engage in a healthier consumption, away from Instagram addiction and false self-presentation. Additionally, these insights could contribute to future improvement of the algorithms and governmental regulations on Instagram and other similar social media platforms. This is discussed in greater detail in the following sections.

The current paper begins with an extensive review of the theoretical background and contextual development of the dependent variables: Instagram addiction and self-presentation, and the independent variable of following. Afterwards, the theory and models applied in the current study are introduced, followed by the methodology. Consequently, the findings from the studies are presented and thoroughly discussed. Lastly, propositions for future research are offered.

2 THEORETICAL BACKGROUND

2.1 FOLLOWING

While prior research has provided evidence for both positive and negative consequences associated to SNS usage, passive use in particular was found to have negative consequences on users' well-being (Chou & Edge, 2012; De Vries & Kühne, 2018; Lup, Trub & Rosenthal, 2015; Tandoc, Ferrucci, & Duffy, 2015). Such passive use on Instagram is characterized as scrolling through the posts of followed and suggested accounts and thereby consuming their content. Since most users only post a few times a month but spend an average of 53 minutes a day on the app (Ennis-O'Connor, 2019), the majority of their time on Instagram is filled by this passive consumption.

When researching the outcomes that browsing on Facebook might have on users, Lin and Utz (2015) found that they were "significantly influenced by: the personal traits of the user, the content of the consumed posts and the relationship between the poster and reader". Specifically, Wilcox and Stephen (2013) found that if users are focused on strong ties while browsing Facebook, it enhances their self-esteem. When adapting these insights from Facebook to Instagram, one must consider that the latter is less focused on connecting with offline friends, and therefore the percentage of followed accounts that users' do not have any ties to is greater.

When exploring the most followed accounts on Instagram, the profiles of traditional celebrities are permanently at the top. Djafarova and Rushworth (2017) state that individuals are likely to mimic the success of their favorite celebrities in hopes of receiving a similar degree of positive feedback to that they observe them obtain. Suggesting, that following such accounts influences a users' self-presentation on Instagram. Moreover, the relatively recent rise of Influencers blurs the line between celebrity and normal users through strategic authenticity (Cotter, 2019; Duffy, 2017). Influencers are the administrators of accounts that have grown a large number of followers on Instagram or other social media and frequently use this social capital to gain access to financial resources (Abidin, 2015). By continually presenting many parts of their life in a credible way, they enable their followers to feel connected to them and stay interested in their content. However, users should stay aware of

the fact that influencers' posts are part of their job and therefore often carefully thought through. While followers might relate to them and their content, often their posts present an "ideal" unachievable by the ordinary person that follows them (Aw & Chuah, 2021).

It must also be noted, that while following posts of strangers, influencers and celebrities, users are susceptible to envy explicable through the attribution theory, which describes the tendency to attribute others' behavior to dispositional rather than situational factors (Jones, 1979). Based on this theory, Lup and colleagues (2015) suggest that following and browsing through the profiles of celebrities and strangers might especially trigger assumptions and thereby negatively impact the well-being of the user. This notion is also in line with a study by Chou and Edge (2012) which discovered that people with more strangers as Facebook "friends", are more likely to believe others' have a better life and consequently suffer infractions on their well-being. Hence, it can be assumed that the types of accounts users' follow play a great role in their Instagram experience. A complete summary of the theoretical background relevant to this study is presented in *Appendix A*.

2.2 INSTAGRAM ADDICTION

As consumers are increasingly spending substantial parts of their day on the internet, and especially on their phones, the expression "Internet addiction" is easily thrown around to describe this phenomenon. Already in 1996, Young studied the trend towards increased usage and found that not the Internet itself is addictive, but instead, specific applications, play a significant role in the development of Internet abuse. Nowadays, social media applications, such as Instagram, are the most popular among users and thus presumably the most prone to cause such an addiction. Through their constant availability, persistent cues, and variable reward mechanisms, social networking sites (SNS) challenge and redefine humans' self-control abilities, resulting in a feeling of compulsion to go on the application (Brevers & Turel, 2019; Turel & Qahri-Saremi, 2016). Hereby, it is important to note that the level of Instagram addiction is not simply based on the time spent on the application, but requires more complex testing (Kim & Han, 2014). Purposely, social media addiction has been defined as "being overly concerned about social media, driven by an uncontrollable motivation to log on to or use social

media, and devoting so much time and effort to social media that it impairs other important life areas” (Andreassen & Pallesen, 2014, p. 4054; Andreassen, Pallesen & Griffiths, 2017).

Due to the fact that social media addiction is a relatively new phenomenon, the academic literature on it is limited. The scant body of research in recent years has focused on understanding the sources of motivation behind Instagram usage. The reasons behind usage are related to the fulfillment of various social needs and enabling of self-adjustment (Huang & Su, 2018). More specifically, Sheldon and Bryant (2016) described four key motives for the use of Instagram: documentation, coolness/popularity, creativity and surveillance or getting knowledge about others. The latter being the process of following others’ accounts and thereby keeping up with their lives, which the current research focuses on.

Interestingly, it has been found that certain personality traits affect the excessive use of social media (e.g., Andreassen et al., 2012, 2017; Hong, Huang, Lin, & Chiu, 2014; Kircaburun & Griffiths, 2017; Wilson, Fornasier, & White, 2010). Specifically, various studies observed that narcissism is correlated to higher levels of social media addiction (Andreassen et al., 2017; Kircaburun et. al., 2017; Ryan & Xenos, 2011). This can easily be explained due to the fact that social media platforms offer the perfect opportunity to share ego-centric content and receive positive, reassuring reactions from other users through likes and comments. Furthermore, other variables such as lower age, female gender and low life-satisfaction have been found to increase the likelihood of Instagram addiction (Andreassen et. al., 2017; Van Deursen, Bolle, Hegner, & Kommers, 2015). Based on these former findings the aforementioned variables were considered as moderators in the current research.

Through the questionnaire of *Study 2* this research aims to examine the effects of the *number*, as well as the different *types* and *topics* of the accounts followed, on the users’ level of ***Instagram addiction***. Thereby, the following three hypotheses will be tested:

H1: A larger number of accounts followed has a positive effect on the level of Instagram addiction

H2: Following more public accounts affects the level of Instagram addiction positively

This hypothesis is based on the respondents' indication of the proportion of the different types of accounts followed. Hereby, *Friends/Family* and *Acquaintances* are considered *private* accounts, and *Influencers*, *Celebrities*, *Brands* and *Others* are considered *public*.

H3: *The different topics of accounts followed have varying effects on the user's level of Instagram addiction*

2.3 SELF-PRESENTATION

The nature of social media sites such as Instagram is, that they allow users to choose and control the posts they want to share with their followers. Thereby fulfilling two broad types of human needs, namely: the need to belong and need for self-presentation (Nadkarni & Hofmann, 2012). Naturally, the control users have, encourages them to focus on sharing predominantly the most positive aspects of their lives (Rosenberg & Egbert, 2011). Moreover, presenting such positive information usually results in affirmative feedback from their followers through likes and comments (Jackson & Luchner, 2018). These have been found to increase the users' self-esteem and eventually their well-being while also providing them with several positive social benefits (Ellison, Steinfield, & Lampe, 2007; Valkenburg, Peter, & Schouten, 2006).

Therefore, many use Instagram as a type of self-marketing platform, not just brands, influencers and celebrities but also private users present their best self through their posts. Initially, Baumeister (1986) defined this act of self-presentation as the "use of behavior to present information about the self to others". Brown (2014) adapted this definition to online self-presentation as the "attempt to create, modify and maintain a certain self-image in the presence of an audience". Interestingly, research has found that this kind of self-presentation and self-promotion are most common on Instagram, compared to other social networks (Markus, 2015; Jackson & Luchner, 2016). Especially young people use social networks to engage in self-exploration of their identities and to present the aspects of themselves of that they are most proud of (Manago, Graham, Greenfield, & Salimkhan, 2008).

Michikyan, Subrahmanyam and Dennis (2014) dissected such self-presentation (on Facebook) and discovered three degrees of it, namely, the presentation of the real- (authentic and true), ideal- (aspirational) and false- (deceptional and explorational) self. Specifically, the real self encompasses actual feelings and appears to be motivated by internal attributes (Harter, Waters & Whitesell, 1996). This online presentation of the real self is considered to have the smallest discrepancy to the offline self of the user (Michikyan, Subrahmanyam & Dennis, 2014). The ideal self represents the ideal attributes, such as aspirations, hopes, wishes of the individual and can involve both negative and positive versions of the self (Higgins, 1987; Markus & Nurius, 1986). Lastly, presenting the false-self means acting in ways that are not aligned with the offline self. This behavior can be initiated for different reasons such as deception (presenting information that is not fully truthful), exploration (trying out different facets of the self), as well as a desire to impress others (by conforming to perceived expectations) (Harter et al., 1996; Michikyan et al., 2014).

Past research found that the users' personality may influence what kind of self-presentation they exhibit (Ross et al., 2009). For example, users' high in narcissism were found to be more conscious of how they may be perceived by others (Kim & Yu, 2020). Specifically, a narcissistic self-presentation is characterized by an exaggeration of the self-concept and the desire to be distinguished from and respected by others (Buffardi & Campbell, 2008). Moreover, the type of self-presentation was found to mediate the relationship between self-criticism and emotional response to the feedback received on Instagram (Jackson & Luchner, 2018). However, thus far there have been no studies on the relationship between the types and topics of accounts a user follows, and the type of self-presentation they portray on Instagram.

Thus, the current study aims to comprehend the effects that the different *types* and *topics* of the followed accounts, have on the users' self-presentation on Instagram. In this regard, the following two hypotheses are tested:

H4: Following more public accounts affects the users' self-presentation towards portraying more of their ideal-, narcissistic- and false- self

H5: Different topics of accounts followed have distinctive effects on the users' self-presentation

Lastly, the sixth hypothesis studies the relationship between Instagram addiction and self-presentation. While this relationship has not been studied by previous research, it is hypothesized that excessive use of the application affects the users present themselves through their posts away from their real-life persona.

H6: A higher level of Instagram Addiction results affects the type of self-presentation exhibited, towards a more ideal/false/narcissistic presentation

The six hypotheses proposed by the current research are presented in the research model below:

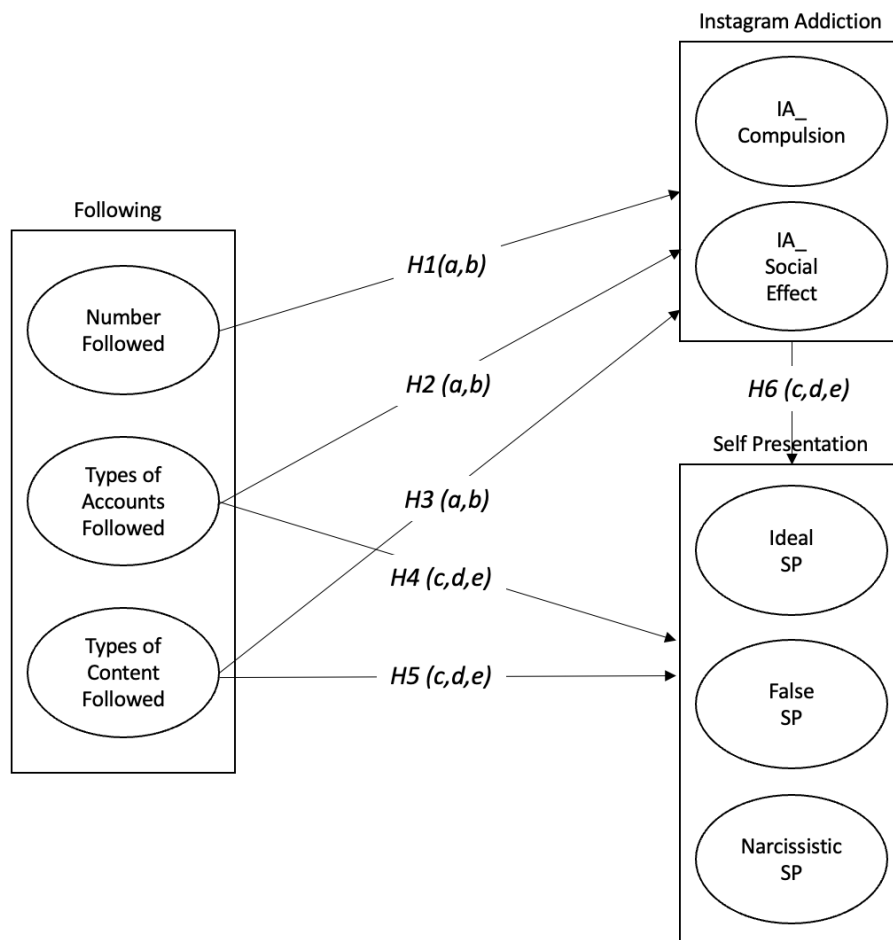


Figure 1 - Hypothesized Model

Notes: Order of the path coefficients for Instagram Addiction: (IA_Compulsion, IA_Social Effect)

Order of the path coefficients for Self Presentation (Ideal SP, False SP, Narcissistic SP)

* p < 0.10; ** p < 0.05; *** p < 0.01.

3 OVERVIEW OF STUDIES

It is undeniable, that the content displayed on a users' feed and thus, a users' experience on Instagram, is strongly dependent on who they are following. However, the impacts of this variable have not been studied explicitly by prior research. Therefore, the current research paper is focused on the effects of the users' following, on their level of Instagram addiction and type of self-presentation.

To test the effects of the independent variables (*number*, *types* and *topics* of followings) in detail, an explanatory research design has been adopted. Specifically, two different primary research studies in form of in-depth interviews, and a structured online questionnaire have been conducted. Whereby, all respondents were regular users of Instagram. Furthermore, since two thirds of Instagram users are between 18 and 30 (Smith & Anderson, 2018), the samples of both studies also belonged to that demographic. Through the two studies ($N = 232$), the current research discovered that only specific types of content and types of accounts significantly affect the Instagram addiction and self-presentation of the users that follow them.

3.1 STUDY 1: IN-DEPTH INTERVIEWS

3.1.1 Study Design & Method

In this first study, twenty in-depth interviews with a diverse group of long-time active Instagram users were conducted. The aim of these interviews was to gather initial insights and a better understanding of the different types of Instagram users, the motivations behind their self-presentation and the perception that they have on their own consumption of the application.

In the interviews, the participants were questioned about their Instagram following, including the number of followed accounts, types of accounts and content followed. Moreover, the interviewees were asked to explain their motivations behind who and what they are primarily following. Besides, they were asked to review how much time they had spent on Instagram in the past week and then questioned about how this made them feel.

Additionally, users were asked to describe how they present themselves on Instagram and why they choose to do so. Towards the end the conversation was led to the effects that they think that their personal Instagram consumption could have had on their self-presentation on usage of the application over time. The full script of these in-depth interview questions can be found in *Appendix B*.

3.1.2 Sample Specification

The interviewees ($N = 20$) were chosen based on researchers' convenience and availability however, the demographics of the participants were considered for the sample to adequately represent the whole population in question. This resulted in a gender distribution of 65% female and 35% male respondents. Moreover, the respondents' age was considered in order to get insights from the population in question (18-30-year old's), therefore the youngest respondent was 18 and the oldest 30, and the average age of the interviewees was 23.65 years. This sample is representative of both Gen Z and Millennials; therefore, this study can be used to make inferences for these generations. It should also be noted that the sample was relatively international, representing seven different nationalities. A complete overview of the sample specifications of this study can be reviewed in *Appendix D.1*.

3.1.3 Procedures & Results

Through these interviews some previously considered premises were confirmed. As for example, that most of the time spent on Instagram is spent by scrolling through their main feed, and thus the content of followed accounts, this was stated by all of the respondents. Further results and findings specific to the three main variables are discussed in the following three sections.

Type of Following:

A series of questions (*Q16, Q17, Q18, Q19*) (e.g.: *Q:17: "How would you describe the accounts you follow?"*) in the interviews were asked to get a better understanding of the

different types of Instagram users and their following. Q17 was used as a pre-test for Study 2 to see whether respondents were able to indicate what type of accounts (friends, acquaintances, celebrities, influencers or others) they follow as a percentage of all their accounts followed. After thinking about this question for approximately 20 seconds, all respondents were able to give an approximation, thus, it was verified that such a question could also be implemented to the online questionnaire of Study 2. It should be noted that none of the twenty interviewees indicated that they follow less than 50% accounts of private people (friends, family or acquaintances). Moreover, over half of the respondents mentioned that keeping in touch with their friends is one of their main motivations to use Instagram. When asked about the type of content they follow (published by the public accounts), the most common answers were “Beauty & Fashion” among females, “Fitness” and “Travel” among all respondents.

Instagram Usage / Addiction:

While no question in the interview specifically mentioned Instagram addiction, numerous questions (e.g.: Q3, Q4, Q6, Q9, Q15, Q20, Q21, Q23 and Q24) were asked to get an indication of the interviewees Instagram usage and whether it can be considered healthy. Such as Q9: *“Can you please walk me through the process that goes behind one of your posts?”* and Q21 *“How would you feel if you were unable to log into Instagram for the next month?”*. Moreover, even though the time spent on Instagram is not directly associated with the users’ level of Instagram it is an aspect of it that is worth being considered (Kim & Han, 2014). When respondents were asked Q3: *“When do you go on Instagram?”* over half said something similar to Irina C. (f, 19):

“Literally, all the time. Whenever I unlock my phone, I tend to click on Instagram to see if there are any new interesting posts or messages from my friends. And then often I get soaked into the app and end up scrolling much longer than I anticipated.”

or Maria M. (f, 20):

“Every time I touch my phone. So, like every 10 minutes probably.”

When it comes to the actual time spent on Instagram, which was checked at the end of the interview, on average the younger interviewees on average spent a lot more time on the application, in comparison to the older respondents. The overall average time spent on Instagram in the past week was $M_{h/week} = 8.3$ hours. With 19.2 hours, Irina C. (f, 19) spending the most time on Instagram, which may be an indication of an Instagram addiction. However, when asked about how she feels about spending this amount of time on just one application on her phone, she responded:

"I am okay with that, I actually thought it was even more. Especially, at the moment, with the whole lockdown situation, I feel like it is one of my biggest time killers and a big way to keep in touch with my friends' lives."

Interestingly, even though their hours spent on the applications were significantly lower, most respondents above 23 years, mentioned that they would like to decrease their time spent on the application. Some are even implementing barriers to access in order to lower their time spent on the application, as for example Helena (f, 24) who stated:

"I want to avoid clicking on it [Instagram] unconsciously, so I put it into a folder on my main screen, then it doesn't directly show and I have to actively search for it. I also get a notification when I spent more than 30min on the app, then I try to stop for that day. But that doesn't always work, it really is a big habit of mine".

Lastly, when asked about how they would feel if they were unable to log into Instagram for the next month (Q21), responses varied greatly from Irina C. (f, 20) who said she would feel

"Oh wow, I think I would die. Without Instagram? No. I don't think I have an addiction, so I guess I would survive, but obviously I would miss it. Maybe it would be okay, if I am busy and with people. But I would definitely not do it voluntarily."

and Margarida P. (f,21) who stated:

"Something would be missing from my life. Maybe I would end up spending more time on another application, but I would definitely miss Instagram a lot. Also, I would feel

like I am missing out, like I wouldn't know what my friends, influencers and everyone else I follow are up to, I don't want to feel that to be honest.”,

to Tomas S. (m,24) who said:

“I would be fine. I have been in the situation before, for example while travelling, and I did not miss it much. Now with the lockdown, maybe it would be a bit harder since there are not that many other things to do, but still, I would get on with my life easily.”

These answers may also be seen as an indicator of the level of compulsion they feel towards Instagram usage and thus their level of addiction. In general, throughout the twenty in-depth interviews especially younger and female respondents revealed some signs of Instagram addiction, such as the described feelings of loss associated to prohibited usage and very long actual time spent on the application.

Self-Presentation:

A few questions of the script were aimed at gaining insights on the interviewees' type of Self-Presentation exhibited on Instagram (Q7, Q8, Q9, Q10, Q11 and Q20). Such as Q10: *“How do you think that a person that only sees your Instagram posts without knowing you would describe you?”* and Q11: *“Do you think that this description would match your offline self as well?”*. As for the types of content posted, almost all respondents indicated that they mainly post pictures of themselves. These answers are in line with the current papers' assumption that young Instagram users primarily use the application for self-presentation. Besides, the most common selfies and pictures of one-self, about half of the respondents also indicated that they like to post pictures with their friends or family. When asked about their reason to post on Instagram (Q8), many respondents stated that they like sharing good aspects of their life with their friends and followers, or have them to look back on, but about a quarter also mentioned that they enjoy receiving likes. When asked about the process that goes behind a post, the respondents answers varied greatly. While some have a short process, such as Rafael J. (m, 26):

"I tend to post on Instagram whenever I take a picture that I think looks nice, or of a memory that I would like to look back on. There is not much of a process, I take a picture, like it, sometimes choose a filter on Instagram, write a short caption about the day or memory and click post."

Many others, especially younger females, have a much longer process behind their Instagram posts, an example of this kind of process is Sissi M. (f, 23), who stated:

"Uhm, so whenever I realize that I haven't posted in a while, maybe around a month, I decide that I want to post something new. Then I check my most recent posts and think about how I could show myself in a different way. That could for example be a different outfit, place or weather. So then if it is a nice day for pictures, I dress myself up in a nice outfit that I would like to show my followers and ask my boyfriend to take as many pictures of me as possible, in different angles and different places. Then I go through them and choose my favorites, which I then retouch. Usually, I use Facetune for subtle pimple hiding, making my smile whiter, and small background modification, but nothing extreme. I don't change any important aspects of the picture. Then I optimize the color scheme through a filter on the app Faded or the brightness, contrast etc. through the iPhone picture options. Sometimes I ask a friend or my boyfriend to help me choose the best picture out of my favorites and then I think of a caption. I don't like writing anything to personal, so I either just put an emoji or google a basic quote that matches the picture, and then I post it."

Such long processes going behind the posts indicate that the way they present themselves to their followers on Instagram is very important to them. No one of the twenty respondents said that they post any picture, everyone made a point to mention that they must like it, must look good in it in order to share it on Instagram. These answers are also in line with the current papers' presumption that everyone presents themselves in their best way on Instagram.

Some of the most interesting answers in the interviews were given to Q10 and Q11, which were aimed at understanding the difference between their self-presentation on Instagram and their real-life persona. Based on the answers, the researcher could assess

whether the respondents engage in a real-, ideal- or false- presentation of themselves. An example of a real self-presentation is Fabio F. (m, 29) who stated:

"I would say people think I travel a lot and have a nice sense of humor."

"Yes, I guess that matches me. I think I am a nice and funny person, so I make sure that my posts match that, and I also travel whenever I get an opportunity to do so, so that's true as well."

Similar answers were mainly given by male, and older respondents. Whereas most interviewees answers indicated that they engage in ideal- self-presentation, such as Svilena M. (f, 25) who answered:

"I think about this a lot because I have a lot of pictures of myself, even showing a lot of skin, so probably people think I am confident and like seeing myself and showing off outfits. But I smile in most of my pictures so hopefully people think that I am nice. Maybe people also think I have a lot of money because I travel quite a lot, rent a car, and go to lots of restaurants etc."

"Mhh, well, I don't hate myself and the way I look, but I wouldn't say that I am as confident as I might seem through my posts. But yes, I like my outfits and sharing them. And I wouldn't call myself rich, but since I can afford these kinds of nice travels and some nice clothes, I guess I can be perceived as it, but like I just don't post my everyday life as much as the nicer stuff and days."

This answer shows that she does not share anything that is not in line with her real life, however, she chooses to post pictures of herself and aspects of her life that portray herself in a good light, closer to her ideal version of herself. There is a thin line between this type of ideal self-presentation, and narcissistic self-presentation, which cannot clearly be classified through these types of interviews. Lastly, three out of the twenty respondents' answers indicated some type of false self-presentation, as for example Irina C. (f, 20) who stated:

"I guess followers that don't know me personally think that I am an arrogant, mean girl, and confident."

“No, I am not like that, I am the opposite actually.”

This, and the other similar answers, were interesting because they described the false self they portrayed with a negative connotation through words such as *“spoiled”, “arrogant”* and *“mean”*. That was somewhat unexpected, since it was not in line with the presumption of the presentation of the best self. However, when Irina C. (f, 20) was asked why she chooses to present herself in that way she said:

“Well, it is the best of me, what I would like to transmit is confidence, beauty and perfection. I only show the very best aspects of myself, and that is obviously very artificial, it conceals my flaws and is far away from the real me, I choose to only show my less human side.”

Accordingly, in her eyes, this “arrogant, mean girl” persona, still represents the best sides of herself, which will receive positive attention from her followers, even though she describes herself as the opposite. Interestingly, all respondents that described a false self-presentation of themselves on Instagram were female and relatively young (under 24).

3.1.4 Discussion

Through this first exploratory study primary insights on the Instagram usage and users’ behavior patterns on the application were gathered. Based on the questions regarding the types of accounts followed, it was established that at least half of the following of most Instagram users consist of private accounts of friends, family and acquaintances. In regard to the content followed, the in-depth interviews confirmed the researcher’s assumption that “Beauty & Fashion” content is the most popular among females specifically. While following “Fitness” and “Travel” content were named by almost all respondents and did not seem to correlate with gender.

Interestingly, the responses of female respondents also indicated that they put a lot more effort into their Instagram posts and present themselves in an ideal, and sometimes even false way. While all respondents mentioned that they present the good aspects of them and their lives, especially females indicated that they felt a need to “fit in” with the high standards presented by others and thus are very considered with what they share. These

answers are in line with the presumptions of the current study that what you follow shapes your perception the standard on the app and therefore affects your own self-presentation.

These in-depth interviews also proved that for many Instagram users the application is a substantial part of their lives, to which they also tend to devote an extensive amount of their free time. Thereby, females and users below the age of 23 were found to spend significantly more time on the application. While the amount of time spent and level of compulsion felt to go on the application are not a clear indication of Instagram addiction, these answers can be used as a first estimation of this variable.

The answers collected and findings made through this first study are all in line with the six hypotheses made in the current research. Moreover, a trend between females following “Beauty & Fashion” content and at the same time demonstrating aspects of Instagram addiction and ideal, narcissistic and even false self-presentation was perceived. However, due to primarily qualitative nature of the in-depth interviews, no significant relationships between the types of following, the level of Instagram addiction and self-presentation on the app could be made at this point. Therefore, the insights of this exploratory study are primarily used for a deeper comprehension of the discovered relationships between the variables.

3.2 STUDY 2: QUESTIONNAIRE

3.2.1 Study Design & Method

The second study was aimed to gain a clearer understanding of how the variables in questions affect and interact with one another. Therefore, an online questionnaire was conducted, in order to attain answers of a large and diverse sample of Instagram users. This questionnaire was distributed through the researchers Instagram account, whereby the researcher also took advantage of the snowball effect, of the post being shared by contacts. All responses were anonymized in order to promote honest answers, additionally, it was specified that there are no right or wrong answers (Casaló et al., 2011).

At the beginning the questionnaire assessed the type of Instagram user that the respondents are. Therefore, they were asked to indicate *1. How many accounts they follow*

on Instagram, 2. What type of accounts these are – by giving a percentage estimate to each of the five different types of accounts, ranging from “Friends & Family”, over “Acquaintances”, to “Influencers”. 3. What type of content they engage with – by asking respondents to choose up to three out of the twelve different types of topics (e.g.: “Beauty & Fashion”, “Comedy”, and “Sports”).

In the second section, the respondents’ self-presentation on Instagram was assessed through a to Instagram adopted version of the 17-item Self-Presentation on Facebook Questionnaire (SPFBQ: Michikyan *et. al.*, 2014). Additionally, a 5-item assessment of their Narcissistic Self-Presentation from Yu and Kim (2020) was added for further insights on the motivations underlying the type of self-presentation they exhibit. Respondents were presented the scales and asked to state their level of agreement to a number of questions, on a 9-point Likert scale. Based on the answers to this part of the questionnaire, the degree to which the respondents’ express facets of the real-, ideal- and false- self through their Instagram posts can be evaluated.

In the third section of the questionnaire, the respondents Instagram usage and level of Instagram addiction was measured. Therefore, the Instagram Addiction Scale (IAS) developed by Kircaburun and Griffiths (2018), which is a modified version of the Internet Addiction Test (Young, 1998) was applied), by simply exchanging the word Internet with Instagram. This scale encompasses the applications’ social effect and compulsion on the respondents’ life and based on the results’ the level of Instagram addiction of the participants is measured. This scale modification resulted in a good Cronbach α coefficient of .90, besides the EFA and CFA results suggested that the scale is valid and reliable in assessing Instagram addiction level (Kircaburun & Griffiths, 2017). The respondents’ level of Instagram addiction was evaluated by stating fifteen statements, to which the respondents have to indicate their level of agreement on a 9-point Likert scale.

Lastly, the respondents’ demographics (gender, age, nationality, and level of education) were considered. A summary of the scales and measures applied in this study can be reviewed in *Appendix C*, and the complete Qualtrics questionnaire can be found in *Appendix G*.

Through a thorough analysis of the respondents' level of Instagram addiction and self-presentation were compared to the types and content of the followed accounts in order to find correlations and clusters of users. Thereby, this study assesses in what way their Instagram following, affects the users' consumption and usage of the application.

3.2.2 Sample Specifications

The sample size of this second study was $N=225$, out of which thirteen did not pass the attention check that was integrated in the Instagram Addiction scale. Therefore, a sample size of ($N = 212$) to the online questionnaire is considered valid. Since this research is focused on Instagram's core user group, aged between 18 and 30, all respondents fulfilled this age requirement with a ($M_{age} = 23.28$). Of the respondents' 76.8% were female, 22.7% male and 0.5% (one respondent) preferred not to state their gender. The survey was distributed through Instagram and thus accessible world-wide. Therefore, the sample was extremely diverse, as the respondents had thirty-three different nationalities, out of which the most common were German (31.1%), Portuguese (19%) and Luxembourgish (10.4%). Also, the education level of the respondents varied greatly, with 43.6%, 34.1% and 20.4% respectively having completed their Bachelors, High-School and Masters' degree. Lastly, it should be noted that 85.8% of the sample indicated to follow Celebrities on Instagram, and 81.0% follow Influencers. *Appendix D.2* offers a full overview of the sample specifications for this second study.

Their answers were analyzed statistically through SPSS, and the information extracted from this analysis was utilized for the discussion and evaluation of the hypotheses.

3.2.3 Measurement Model

To explore the relationships and affects between the variables in question, a partial least squares structural equation modeling (PLS-SEM) was conducted through SmartPLS 3 (Ringle, Wende, & Becker, 2015). The partial least squares (PLS) method was chosen due to its suitability for studies with a small sample size with no restrictive assumptions on the

normality. In this section, first the initial regression analysis is explained, then the validity of this measurement model is assessed and afterwards the proposed hypotheses are tested.

Prior to the structural equation modelling, a regression analysis of the type of accounts and content followed was conducted on SPSS. Thereby the significance of the effects of following the different types of contents and accounts on the users' level of Instagram addiction were tested separately. Interestingly, out of the four types of accounts studied, only following Influencers was found to have a significant effect of $t=3.468$ ($\beta =.039$, $p=.001$). Similarly, out of the twelve different types of content considered the only significant effect on Instagram addiction discovered was related to following Beauty & Fashion where $t=3.173$ ($\beta =.263$, $p=.002$). Therefore, moving forward in the research the hypothesized variable "*Types of Accounts Followed*" was replaced with "*Influencers*" and "*Content of Accounts Followed*" was replaced with "*Beauty & Fashion*". A complete overview of the regression analysis conducted is provided in *Appendix E - Results SPSS Analysis – Study 2 (E.1 and E.2)*.

As suggested by Hair, Hult, Ringle, and Sarstedt (2016), the internal consistency, convergent validity and discriminant validity were computed to assess the validity of the measurement model. Thereby internal consistency was assessed through the Cronbach alpha coefficient. Since this study was of exploratory nature, a value of 0.6 can be considered the minimum value for the Cronbach's Alpha (Hair, Risher, Sarstedt & Ringle, 2019). When it comes to the Composite Reliability, values above 0.7 are considered statistically significant. The results are displayed in the following Table 1.

| | Cronbach's Alpha | rho_A | Composite Reliability | Average Variance Extracted (AVE) |
|--|-----------------------------|--------------|----------------------------------|---|
| <i>Instagram Addiction</i> | 0.830 | | | |
| <i>Instagram Addiction – Social Effect</i> | 0.755 | 0.763 | 0.818 | 0.297 |
| <i>Instagram Addiction – Compulsion</i> | 0.627 | 0.644 | 0.769 | 0.462 |
| <i>Self-Presentation</i> | | | | |
| <i>Ideal Self-Presentation</i> | 0.574 | 0.596 | 0.748 | 0.382 |
| <i>False Self-Presentation</i> | 0.675 | 0.679 | 0.793 | 0.435 |
| <i>Narcissistic Self-Presentation</i> | 0.701 | 0.725 | 0.806 | 0.461 |

Table 1 - Validity of Measurement Model

Afterwards, the loadings and cross-loadings of the indicators were analyzed to assess the indicator reliability. *Table 2* shows that the loading of each indicator of self-presentation is greater than all cross-loadings, thereby they fulfill the associated criterion of Henseler, Ringle and Sinkovics (2009) for indicator reliability. However, it should be noted that the loading and cross-loading of the two Instagram addiction measurement scales are not as distinct and do not fulfill the aforementioned criterion.

| | False SP | Ideal SP | Narcissistic SP | IA_ Social Effect | IA_ Compulsion |
|-------|--------------|--------------|-----------------|----------------------|-------------------|
| FS1 | 0.591 | 0.133 | 0.333 | 0.220 | 0.055 |
| FS2 | 0.696 | 0.309 | 0.480 | 0.294 | 0.225 |
| FS3 | 0.679 | 0.179 | 0.251 | 0.317 | 0.322 |
| FS4 | 0.648 | 0.411 | 0.498 | 0.221 | 0.156 |
| FS5 | 0.677 | 0.240 | 0.388 | 0.279 | 0.221 |
| IS1 | 0.011 | 0.567 | 0.286 | 0.176 | 0.080 |
| IS2 | 0.192 | 0.548 | 0.295 | 0.149 | 0.101 |
| IS3 | 0.314 | 0.435 | 0.270 | 0.142 | 0.109 |
| IS4 | 0.381 | 0.758 | 0.416 | 0.206 | 0.154 |
| IS5 | 0.266 | 0.725 | 0.424 | 0.160 | 0.026 |
| NS1 | 0.442 | 0.455 | 0.704 | 0.273 | 0.257 |
| NS2 | 0.203 | 0.283 | 0.547 | 0.260 | 0.117 |
| NS3 | 0.474 | 0.377 | 0.771 | 0.274 | 0.178 |
| NS4 | 0.415 | 0.436 | 0.799 | 0.336 | 0.274 |
| NS5 | 0.491 | 0.320 | 0.526 | 0.199 | 0.188 |
| SIA1 | 0.278 | 0.181 | 0.191 | 0.557 | 0.296 |
| SIA2 | 0.090 | 0.224 | 0.286 | 0.274 | 0.225 |
| SIA3 | 0.194 | 0.102 | 0.209 | 0.513 | 0.298 |
| SIA4 | 0.207 | -0.022 | 0.158 | 0.501 | 0.461 |
| SIA5 | 0.220 | 0.118 | 0.150 | 0.490 | 0.420 |
| SIA6 | 0.274 | 0.191 | 0.273 | 0.606 | 0.474 |
| SIA7 | 0.195 | 0.071 | 0.215 | 0.546 | 0.295 |
| SIA8 | 0.284 | 0.161 | 0.291 | 0.674 | 0.526 |
| SIA9 | 0.136 | 0.136 | 0.142 | 0.527 | 0.403 |
| SIA10 | 0.251 | 0.216 | 0.231 | 0.586 | 0.534 |
| SIA11 | 0.240 | 0.167 | 0.202 | 0.622 | 0.372 |
| CIA1 | 0.176 | 0.010 | 0.184 | 0.511 | 0.476 |
| CIA2 | 0.257 | 0.126 | 0.258 | 0.524 | 0.735 |
| CIA3 | 0.228 | 0.116 | 0.215 | 0.603 | 0.765 |
| CIA4 | 0.185 | 0.122 | 0.172 | 0.416 | 0.704 |

Table 2: Loadings and Cross Loadings

For the examination of the discriminant validity the Heterotrait-Monotrait ratio (HTMT) was applied, whereby values below 0.9 support discriminant validity (Henseler, Ringle, & Sarstedt, 2015). Since Fornell and Larcker (1981) suggested that if AVE is less than 0.5, but composite reliability is higher than 0.6, the convergent validity of the construct is still adequate. Except for the anticipated lack of discriminant validity between the two scales measuring Instagram Addiction (namely: *IA_Social Effect* and *IA_Compulsion*), all other values proved to have appropriate discriminant validity. Consequently, it can be confirmed that this measurement model is adequate. The following *Table 3* portrays the correlational matrix between factor items which and the corresponding discriminant validity values of Study 2.

| | Beauty & Fashion | False_ SP | IA_Com- pulsion | IA_ Social Effect | Ideal_ SP | Influen- cers | Narciss- istic_SP |
|-----------------------------|------------------------|--------------|--------------------|-------------------------|--------------|------------------|----------------------|
| Beauty & Fashion | | | | | | | |
| False_SP | 0.285 | | | | | | |
| IA_Compulsion | 0.333 | 0.459 | | | | | |
| IA_Social Effect | 0.296 | 0.550 | 1.083 | | | | |
| Ideal_SP | 0.220 | 0.662 | 0.275 | 0.440 | | | |
| Influencers | 0.268 | 0.420 | 0.303 | 0.305 | 0.208 | | |
| Narcissistic_SP | 0.251 | 0.897 | 0.453 | 0.537 | 0.890 | 0.199 | |

Table 3 - Heterotrait-Monotrait Ratio (HTMT)

Additionally, the variance inflation factor (VIF) of the outer and inner structural equation model was calculated to test for possible multicollinearity problems. Since all the calculated VIF values were between 1. and 1.573 and Kock and Lynn (2012) set the maximum threshold at 3.3, the absence of multicollinearity problems can be concluded.

3.2.4 Structural Model

The structural equation model was examined through the bootstrapping technique using 10,000 iterations. The analysis involved a process of testing the six hypotheses. *Figure 2* portrays the initially hypothesized structural equation model with the corresponding path coefficients and level of statistical significance measured through the p-Value. For a full

overview of the Path Coefficient results and a Structural Equation Model which includes the significant indirect effects please refer to *Appendix F*.

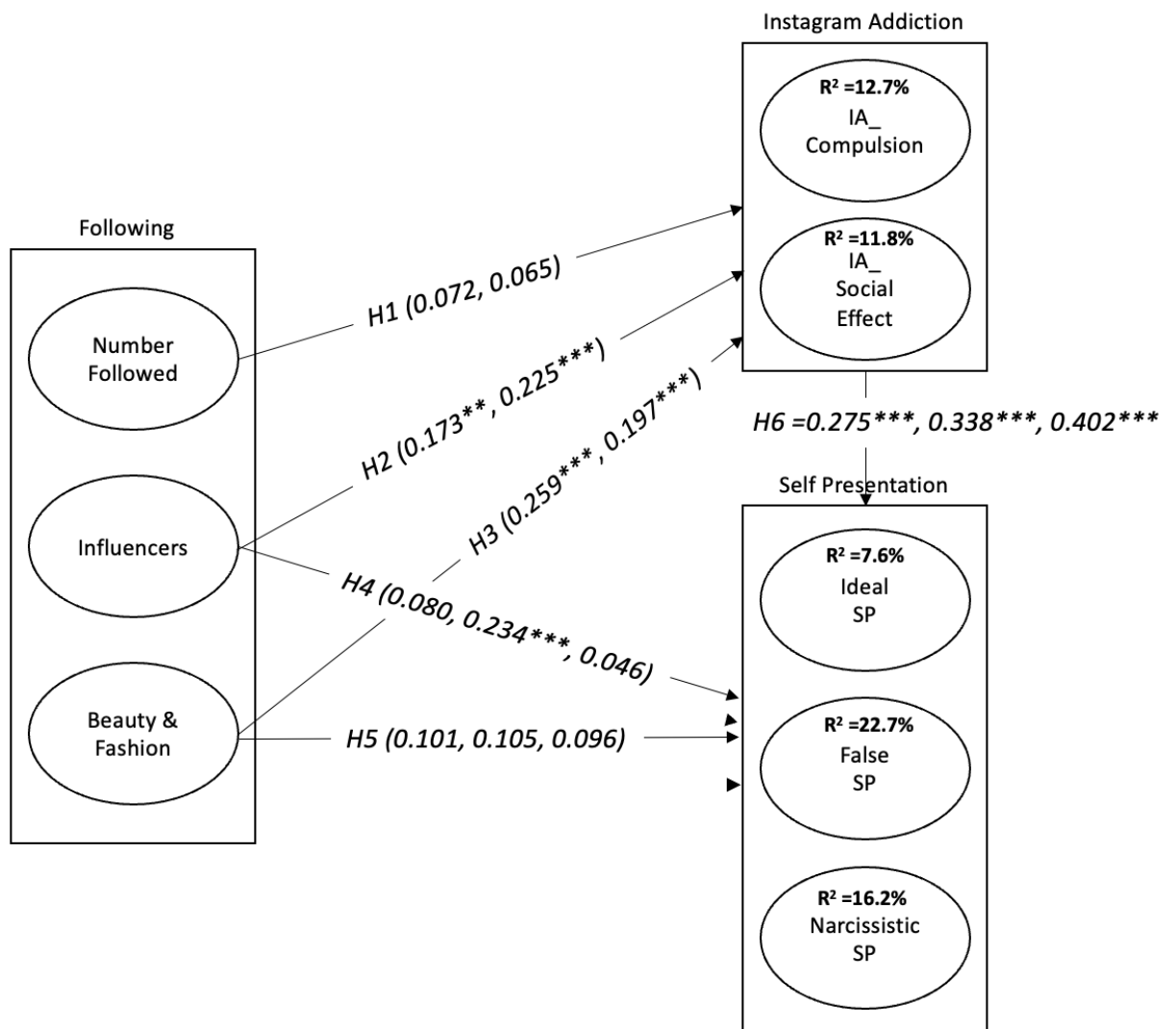


Figure 2 –Structural Equation Model

Notes: Order of the path coefficients for Instagram Addiction: (IA_ Compulsion, IA_ Social Effect)

Order of the path coefficients for Self Presentation (Ideal SP, False SP, Narcissistic SP)

* p <0.10; ** p<0.05; ***p<0.01.

As previously mentioned, due to the results of the regression analysis (*Appendix E - Results SPSS Analysis – Study 2*) there are two differences observable when comparing this *Structural Equation Model* (Figure 2) with the initially *Hypothesized Model* (Figure 1). Instead of referring to the independent variables “Type of Accounts Followed” and “Content of Accounts Followed”, this model refers to “Influencers” (accounts followed) and “Beauty &

Fashion” (content followed). These modifications were undertaken because out of all the types of accounts and content investigated, only these two were found to have a significant effect on the respondents’ level of Instagram addiction.

It should also be mentioned that the variable *Gender* of the Instagram users was found to have a moderating effect on the types of content and accounts followed. Specifically, female *Gender* highly affected the likelihood of following *Influencers* with a $t = 5.872$ ($\beta=0.281$, $p>0.000$) as well as the likelihood of following *Beauty & Fashion* content ($t = 3.666$, $\beta=0.257$, $p>0.000$). This may indicate a causal relationship, whereby the followed accounts and content acts as a moderator between the demographics and their level of Instagram addiction.

3.2.5 Hypotheses Analysis

According to Hair et al. (2009), if the result of the t-statistics is between 1.96 and -1.96, the hypothesis is rejected and if it is outside of the mentioned range, it indicates that the research hypothesis has been confirmed. Thereby, the statistical significance must also be regarded, in the current study a level of $\alpha= 0.05$ is considered. In this section, the six proposed hypotheses are reviewed and the corresponding findings on Study 2 are presented. The corresponding statistical findings of the path coefficients are provided in *Appendix F.1* and *F.2*.

H1: *A larger number of accounts followed has a positive effect on the level of Instagram addiction.*

The findings related to the research model do not support this first hypothesis hence, this relationship is not demonstrated in the *Significant Path Analysis of Structural Equation Model* (Figure 2). Specifically, in this second study the *Number of Accounts* followed had an effect of $t = 0.944$ ($\beta=0.072$, $p=0.346$) on *IA_Compulsion*, and of $t = 0.804$ ($\beta =0.066$, $p=0.422$) on *IA_Social Effect*. The reasons why this relationship could not be observed through this study might also be related to the design of the questionnaire or other omitted constructs.

However, through the Structural Equation Modelling it was discovered that the *Number of accounts followed* does have a significant effect on another dependent variable, namely *Narcissistic_SP*, with a $t = 3.314$ ($\beta=0.156$, $p=0.001$). While this finding was

unexpected, it is in line with the presumptions about a Narcissistic Self-Presentation and should be further analyzed in future studies.

H2: Following more public accounts affects the level of Instagram addiction positively

As previously mentioned, the scope of this hypothesis was narrowed, since initially the *public accounts* variable referred to both *Influencer* and *Celebrity* accounts. However, the findings revealed that this hypothesis can only be confirmed for *Influencers* followed. The results showed that following *Influencers* has a significant positive effect on both *IA_Social Effect* with $t = 3.144$ ($\beta=0.227, p=0.001$) and *IA_Compulsion* with $t = 2.522$ ($\beta=0.175, p=0.013$).

H3: The different topics of accounts followed have varying effects on the user's level of Instagram addiction

The findings of this second study also confirmed this third hypotheses, however, only one type of content was found to have a significant effect on the level of Instagram Addiction. Specifically, *Beauty & Fashion* content was found to have a similar positive effect on the level compulsion related to Instagram with a $t = 3.605$ ($\beta=0.255, p>0.000$) and a $t = 2.974$ ($\beta=0.195, p=0.002$) on the social effects of Instagram Addiction.

H4: Following more public accounts affects the users' self-presentation towards portraying more of their ideal- and false- self

Based on the questionnaires' findings, this hypothesis can be confirmed. Again, only following public accounts of *Influencers* were found to have a statistically significant effect on the type of self-presentation exhibited by the respondent. Moreover, following *Influencers* was found to have a strong effect on *False Self-Presentation* with $t = 4.046$ ($\beta=0.255, p>0.000$). While the direct effects of following *Influencers* on *Ideal - and Narcissistic - Self-Presentation* were not found to be significant, the SEM analysis revealed small positive indirect effects, through the independents' variable effect on *IA_Social Effect*. Consequently, this fourth hypotheses can be confirmed. A full overview of these, and all other, indirect effects is depicted in *Appendix F*.

H5: Different topics of accounts followed have distinctive effects on the users' self-presentation

In relation to this fifth hypothesis, no direct effects were found to be significant, therefore, it is not portrayed in the model of *Figure 2*. However, a marginal, but significant indirect effect of *Beauty & Fashion* content, through its positive effect on *IA_Social Effect*, on *Narcissistic* – ($t = 2.596, \beta = 0.076, p = 0.008$), *False* – ($t = 2.414, \beta = 0.066, p = 0.016$) and *Ideal* – *Self-Presentation* ($t = 2.194, \beta = 0.054, p = 0.028$) were discovered. Consequently, H5 can be confirmed.

H6: *A higher level of Instagram Addiction results affects the type of self-presentation exhibited, towards a more ideal/false/narcissistic presentation*

Finally, the results showed that specifically the social aspect of Instagram addiction (*IA_Social Effect*) has high, direct, significant effects on the three hypothesized types of self-presentation. Thereby, *IA_Social Effect*, has the models' biggest effect on *Narcissistic SP* with $t = 6.598 (\beta=0.391, p>0.000)$, closely followed by its effect on *False SP* ($t = 5.215, \beta=0.338, p>0.000$) and *Ideal SP* ($t = 4.919, \beta = 0.274, p>0.000$). Consequently, this hypothesis can also be confirmed.

The following *Table 4* offers a clear overview of the results of all six hypotheses:

| Hypothesis | Path | Coefficient (t) | Significance (p) | Verdict |
|-------------------|---|------------------------|-------------------------|----------------------|
| H1 | <i>Number Followed -></i> | | | <i>Not Supported</i> |
| | <i>IA_Social Effect /</i> <i>IA_Compulsion</i> | 0.944 0.804 | 0.346 0.422 | |
| H2 | <i>Influencers -></i> | | | <i>Supported</i> |
| | <i>IA_Social Effect /</i> <i>IA_Compulsion</i> | 3.144 2.522 | 0.001* 0.013* | |
| H3 | <i>Beauty & Fashion -></i> | | | <i>Supported</i> |
| | <i>IA_Social Effect /</i> <i>IA_Compulsion</i> | 2.974 3.605 | 0.002* > 0.000* | |
| H4 | <i>Influencers -></i> <i>False_SP</i> | 4.046 | > 0.000* | <i>Supported</i> |
| H5 | <i>Beauty & Fashion -></i> | | | <i>Supported</i> |
| | <i>Narcissistic_SP</i> | 2.596 | 0.008* | |
| | <i>False_SP</i> | 2.414 | 0.016* | |
| | <i>Ideal_SP</i> | 2.194 | 0.028* | |

| | | | | |
|-----------|------------------------|-------|----------|------------------|
| H6 | IA_ Social Effect -> | | | |
| | <i>Narcissistic_SP</i> | 6.598 | > 0.000* | <i>Supported</i> |
| | <i>False_SP</i> | 5.215 | > 0.000* | |
| | <i>Ideal_SP</i> | 4.919 | > 0.000* | |

Table 4 - Overview of Hypotheses Results

4 GENERAL DISCUSSION

4.1 SUMMARY

The current study investigated the research gap on how *who* and *what* one follows on Instagram may affect their level of Instagram addiction and the type of self-presentation they exhibit through their own profiles on the application. Applying a mixed-method approach, the researcher gathered qualitative data and insights across twenty in-depth interviews with Instagram users, and tested the six hypotheses through structural equation modelling with data collected through an extensive online-questionnaire.

The insights gathered through the in-depth interviews ($N = 20$) were in line with the theoretical background on Instagram addiction and Self-Presentation, as well as the six hypotheses made. Thereby, a trend in relation to female Instagram users following Beauty and Fashion content and at the same time exhibiting characteristics of Instagram addiction and an ideal, narcissistic and even false self-presentation was first discovered.

This discovery was later confirmed by the structural equation modelling of the data obtained through the questionnaire ($N = 212$). In contrast to what was initially hypothesized, it was found that not all types of following, but solely *Beauty & Fashion* content and accounts of *Influencers* have an effect on their followers' level of Instagram addiction and type of self-presentation.

4.2 THEORETICAL IMPLICATIONS

Since no prior research had studied the specific impact that the consumption of the content and types of accounts primarily followed on Instagram has on users, the findings made in the current research act as a basis for future studies examining the effects of following.

The first core finding of the current study is related to the results of H2 and H3, which indicate that only some types of accounts and content followed have a significant effect on the level of Instagram addiction. Out of the twelve types of content and five types of accounts studied, only following *Beauty & Fashion* content and *Influencers* accounts were found to have

a significant positive effect on both the compulsion and social aspect of users' Instagram addiction. This finding suggests that Instagram users that primarily follow Beauty and Fashion content and/or a higher percentage of Influencers, are more likely to "being overly concerned and devoting so much time and effort to (this) social media that it impairs other important areas of their life" (Andreassen & Pallesen, 2014, p. 4054; Andreassen, Pallesen & Griffiths, 2017).

At the same time, it must be considered that past research has already found that certain personality traits affect the excessive use of social media (e.g., Andreassen et al., 2012, 2017; Hong, Huang, Lin, & Chiu, 2014; Kircaburun & Griffiths, 2017; Wilson, Fornasier, & White, 2010). Therefore, there may be a complex relationship between users' personality, who users choose to follow, and their level of Instagram addiction, which should be investigated by future research. This study supports the findings of the existing literature that some demographics such as lower age and female gender increase the likelihood of Instagram addiction (Andreassen et al., 2017; Van Deursen, Bolle, Hegner, & Kommers, 2015). Interestingly, the results of the current study also showed that these demographics are also the most likely to follow Beauty and Fashion, as well as Influencer content.

It should be noted that based on preceding findings on the causes of Instagram addiction, the current study considered low life satisfaction and low self-esteem as potential moderators to the hypotheses tested. However, through the two studies no significant moderating effect of these variables was found.

The second core finding of the current study is related to the type of self-presentation users exhibit on Instagram, based on what type of accounts they follow. Hereby, following Influencers was found to have a strong, direct and positive effect on presenting one's false self. Past research has determined that such an exhibition of one's false self may be deceptional, explorational or stem from a desire to impress others by conforming to their perceived expectations (Harter et al., 1996; Michikyan et al., 2014). The latter appearing the most applicable to following and potentially imitating influencers, who themselves frequently use their profiles to present an "ideal" unachievable by the average person that follows them.

Moreover, the results of the current study also show that the social effect of Instagram addiction directly affects ideal-, false- and narcissistic-self-presentation. Which, as discussed

above, is directly and positively affected by following Influencers as well as Beauty & Fashion content. Therefore, a number of indirect effects between these types of accounts and contents followed on presenting anything but the real self on Instagram. Confirming the proposed hypotheses, that the consumption of Beauty and Fashion content and/or following the carefully curated lives of Influencers results in users also “attempting to create, modify and maintain a certain self-image” which deviates from their real-offline-self (Brown, 2014). Thereby it should be noted that this self-presentation might stem from a longing for affirmative feedback through likes and comments (Jackson & Luchner, 2018), which these users also observe the influencer accounts that they follow receiving.

Lastly, while the results of the number of accounts followed were not found to have a significant effect on Instagram addiction and thus H1 was not confirmed, a higher number of accounts followed was found to have a significant positive effect on narcissistic self-presentation. This exaggeration of one’s self-concept may also be attributed to the aforementioned desire for recognition and affirmative feedback, which also was found to provide users with several benefits, such as increase in self-esteem and eventually well-being (Ellison, Steinfield, & Lampe, 2007; Valkenburg, Peter, & Schouten, 2006).

4.3 PRACTICAL IMPLICATIONS

This work has implications for practitioners and policy makers. First marketers within the Beauty and Fashion space may be able to take advantage of the findings that followers of such content and Influencer accounts on Instagram, are the most prone to becoming Instagram addicted and shaping their self-presentation towards a more ideal-, narcissistic- or even false- version of themselves. Considering that the followers of Influencers and Beauty and Fashion content are adapting their self-presentation in order to match the “ideal” presented by the accounts they follow, it is probable that they will also follow their recommendations to become more like them. Therefore, the recommendations and advertisements related to Beauty and Fashion content and/or posted by Influencers, are expected to be especially effective and profitable. Consequently, brands should especially invest in Instagram advertisements in these content categories and Influencer sponsorships.

Besides, the findings of this paper provide insightful information to Instagram, but also other Social Network, users. If users take these findings into account, they could hopefully forego or leave a state of Instagram addiction by unfollowing a number of accounts that contribute to this addiction. Moreover, the findings could encourage users to focus on the self-presentation of their real- instead of ideal-, narcissistic- or false- self. Again, such a transformation might involve unfollowing types of accounts that subconsciously inflict those standards on the users. Luckily, users are in full control of what accounts they follow, and what they see while scrolling through Instagram. Thus, this research suggests that if they use this power wisely and apply the findings correctly, they can achieve a more positive Instagram experience.

At the same time, the findings may be utilized by policymakers and parents, acting as a basis for educating young Instagram users on the factors that are increasing their probability to suffer from Instagram addiction.

4.4 RESEARCH LIMITATIONS

Several research limitations of this study have been considered. One being the collection of the respondents for both studies, which was random but based on accessibility of the researcher, and hence, the sample is not fully representative to the whole population of Instagram users. Since the current study focused on users aged between 18-30, the findings can primarily be used to make inferences to Gen Z and Millennials. While these currently represent the main group of Instagram users, future studies could organize a multi-group analysis, to study the differences amongst age groups. Furthermore, both the questionnaire and interviews, rely on estimations (e.g.: on the type and topics of the accounts followed) and self-reporting made by the respondents, which are subject to error. These responses might not be fully accurate and thereby could have affected the findings. Besides, through the in-depth interviews there could have been a bias inflicted on the respondents by the interviewing researcher. Moreover, due to the cross-sectional nature of the studies, and the data being collected just at one point in time, it is not possible to determine causality between the

variables. However, being well aware of these limitations, the researcher assured that they were considered and comprised as much as possible.

Future studies should consider these limitations and adjust their research models accordingly. It would be interesting to further investigate these findings through an experimental research design. Thereby, future studies should focus on investigating the effects of following Beauty and Fashion content, and Influencers on Instagram addiction. Moreover, the significant relationship between the social aspect of Instagram addiction and a more ideal-, narcissistic- and false- self-presentation should be studied in more depth. Lastly, further studies on the long-term effects of both Instagram addiction and ideal-, narcissistic- or false- self-presentation on the psychological wellbeing of users are required.

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6 APPENDIX

APPENDIX A: THEORETICAL BACKGROUND

| TOPIC | RESEARCH | REFERENCES |
|--|--|---|
| The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey | Analyzed the associations between addictive use of social media, narcissism, and self-esteem. Findings supported the notion of addictive social media use reflecting a need to feed the ego and an attempt to inhibit a negative self-evaluation. | (Andreassen, Pallesen, & Griffiths, 2017) |
| I feel your pain: emotional closeness modulates neural responses to empathically experienced rejection | Psychological study that examined that the "pain" network is similarly implicated in witnessing a friend suffer social rejection, and that emotional and interpersonal closeness modulates this response. | (Beeney, Franklin, Levy, & Adams, 2011) |
| Social networking site use: Linked to adolescents' social self-concept, self-esteem, and depressed mood | Employed a multidimensional measure of SNS use to investigate the link between adolescent SNS use and indicators of adjustment. The results showed that frequency of SNS use was linked to higher social self-concept while investment in SNSs resulted in lower self-esteem and higher depressed mood. | (Blomfield & Barber, 2014) |
| Understanding the intention to follow the advice obtained in an online travel community | Analyzed precursors of the consumer intention to follow advice obtained in an online travel community. Thereby, attitude towards the advice, trust in community and perceived usefulness of the information were found to be the main determinators. | (Casaló, Flavián, & Guinalíu, 2011) |
| Antecedents of consumer intention to follow and recommend an Instagram Account | Analyzed consumers' perceived enjoyment and usefulness on their intention to follow and recommend an official account of a brand community. Results showed that enjoyment and usefulness have a positive effect on satisfaction and thereby on the intention to follow and recommend an account. | (Casaló, Flavián, & Ibanez, 2011) |
| Playing the visibility game: How digital influencers and algorithms negotiate influence on Instagram | Describes two interpretations of the Instagram algorithm, combining information influencers glean with preexisting discourses on authenticity and entrepreneurship from influencer communities. Shows how algorithms structure the interdependencies between users, but do not unilaterally determine user behavior. | (Cotter, 2019) |
| Exploring the credibility of online celebrities' Instagram profiles in influencing the purchase decisions of young female users | Investigated the impact of Instagram upon source credibility, consumer buying intention and social identification with different types of celebrities. Results showed that non-traditional celebrities such as bloggers, YouTubers and "Instafamous" | (Djafarova & Rushworth, 2017) |

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| | profiles are more powerful in influencing busing behavior than celebrities. | |
| Social comparisons on social media: The impact of Facebook on young women's body image concerns and mood | Experimentally investigated the effect of Facebook usage on women's mood and body image, comparing them to a online fashion magazine. After 10min participants who spent time on Facebook reported being in a more negative mood than those who browsed through the control website. | (Fardouly, Diedrichs, Vartanian & Halliwell, 2014) |
| Motives for Instagram use and topics of interest among young adults | Investigates the motives for Instagram use and topics of interest based on smartphone addiction and uses as well as the gratification theory. Revealed motives were mostly to look at posts, particularly involving social interaction and diversion motives. | (Huang & Su, 2018) |
| Self-presentation mediates the relationship between Self-criticism and emotional response to Instagram feedback | Investigated how individuals emotionally respond to imagined positive and negative Instagram feedback depending on personality and self-presentation on Instagram. | (Jackson & Luchner, 2018) |
| The rocky road from acts to dispositions | Examined the attributional error of overestimating dispositions as a cause of behavior. | (Jones, 1979) |
| Self-branding, 'micro-celebrity' and the rise of Social Media Influencers | Critique on how and why self-branding has become prevalent, parallel to the growth of social media. Sees self-branding as a distortion of key branding principles that has obvious implications for its practitioners and advocates. | (Khamis, Ang, & Welling, 2017) |
| Why smartphone advertising attracts customers: A model of Web advertising, flow, and personalization | Studied the potential benefits of combining a Web advertising model, personalization and flow theory in understanding the antecedents of purchase intention and influence processes in the context of smart-phone advertisements. | (Kim & Han, 2014) |
| Instagram addiction and the Big Five of personality: The mediating role of self-liking | Examined the relationships between personality, self-liking, daily Internet use, and Instagram addiction, as well as exploring the mediating role of self-liking between personality and Instagram addiction using path analysis. | (Kircaburun & Griffiths, 2018) |
| Envy on Facebook: a hidden threat to users' life satisfaction? | Investigated the feelings of social comparison and envy that may affect Facebook users' while scrolling through their feed. Through two studies the researchers explored scale, scope and nature of envy as well as envy as a mediator between following and users' life satisfaction. | (Krasnova, Wenninger, Widjaja & Buxmann, 2013) |
| The emotional responses of browsing Facebook: Happiness, envy and the role of tie strength | Explored the emotional outcomes of reading a post on Facebook and examine the role of tie strength in predicting happiness and (benign and malicious) enjoy. Results showed that tie strength is positively associated with happiness and benign | (Lin & Utz, 2015) |

envy, whereas malicious envy is not affected by tie strength.

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| Instagram #Instasad?: Exploring Associations Among Instagram Use, Depressive Symptoms, Negative Social Comparison, and Strangers Followed | Tested a theoretically grounded moderated mediation model of the association between Instagram use and depressive symptoms through the mechanism of negative social comparison, and moderation by amount of strangers one follows. Results showed more frequent Instagram use to have a negative association with social comparison and depressive symptoms for people who follow more strangers, but positive associations for people who follow fewer strangers. | (Lup, Trub & Rosenthal, 2015) |
| Instagram: Friend or foe? The application's association with psychological well-being | Examined the association between Instagram and its users' psychological well-being on users. Measuring depression, anxiety, loneliness, self-esteem, body image and social comparison of users and non-users. | (Mackson, Brochu & Schneider, 2019) |
| Can You Guess Who I Am? Real, Ideal, and False Self-Presentation on Facebook Among Emerging Adults | Used a multiple self-presentation framework to examine emerging adults' presentation of their real, ideal and false self on Facebook. Thereby their identity state, psychological well-being, and online self-presentation were considered. | (Michikyan, Dennis & Subrahmanyam, 2015) |
| Can you tell who i am? Neuroticism, extraversion, and online self-presentation among young adults | Studied the link between neuroticism, extraversion, with users' presentation of the real, ideal and the false self on Facebook. Revealed that young adults high in neuroticism presented their ideal and false self to a greater extent. | (Michikyan, Subrahmanyam, & Dennis, 2014) |
| The role of self-promotion on Instagram | Studied the relationship between narcissism and Instagram users' self-promoting behavior. Showed that individuals higher in narcissism post more selfies and self-presented photos, updated more often and spent more time on Instagram. | (Moon, Lee, Lee, Choi & Sung, 2016) |
| Personality and motivations associated with Facebook use | Investigated how the Five-Factor Model of personality relates to Facebook use. Besides the expected trends of Extraversion and Openness to Experience, the results showed a smaller effect of personality factors than in previous literature. | (Ross, Orr, Susic, Arseneault, Simmering & Orr, 2009) |
| Instagram: Motives for its use and relationship to narcissism and contextual age | Studied Instagram users' motives for use of the application in relationship to their contextual age and narcissism. Survey revealed that the main reasons for use are "Surveillance/Knowledge about others", "Documentation", "Coolness" and "Creativity". | (Sheldon & Bryant, 2016) |
| The influence of social media intensity and EWOM on conspicuous consumption | Based on sociology and marketing literature, a model linking the intensity of social media use with consumers' reliance on electronic word of mouth (EWOM) and their consumption of | (Thoumrungroje, 2014) |

conspicuous products. Suggests that social media and EWOM are effective tools to entice demand.

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| Psychology of computer use: XL. Addictive use of the Internet: a case that breaks the stereotype | Case study about how internet addiction can affect a persons' life. Defines addictive use of the Internet, outlines the subject's progression and discusses the implications of such behavior. | (Young, 1996) |
| Social Comparison as the Thief of Joy: Emotional Consequences of Viewing Strangers' Instagram Posts | Experiment investigating the emotional consequences of viewing strangers' positive posts on Instagram, based on the to the discrepancy between the social comparison and emotional contagion perspective. | (Vries, Möller, Wieringa, Eigenraam, & Hamelink, 2018) |
| Are Close Friends the Enemy? Online Social Networks, Self-Esteem, and Self-Control | Used five experiments to demonstrate that social network use enhances self-esteem in users who are focused on close friends while browsing through their social. While at the same time reducing self-control after browsing. | (Wilcox & Stephen, 2013) |

APPENDIX B: FULL SCRIPT OF IN-DEPTH INTERVIEW QUESTIONS – STUDY 1

Thank you for participating in this study on for my Master thesis about Instagram.

Today I will ask you a few questions about your personal Instagram behavior. This interview should take around 30min and it is important that you answer all questions honestly.

Before we start, do you have your phone with you? Because at the end of the interview I might ask you to take it out to check some values.

1. How long have you had Instagram?
2. What is your purpose in using Instagram?
3. When do you go on Instagram?
4. How much time would you estimate that you spend on Instagram on average in a week?
5. What exactly would you say do you spend your time with on Instagram?
(Watching stories or lives? Scrolling through feed? Posting? Stalking?)
6. Approximately how many posts have you made in this time?
7. How would you describe your posts overall?
8. Why do you post on Instagram?
9. Can you please walk me through the process that goes behind one of your posts? (All the steps and thoughts that occur from thinking about a picture to posting it)
 - i. Do you take pictures specifically for Instagram?
 - ii. Do you edit your pictures? How?
 - iii. Do you write a caption? How?
 - iv. Do you think about when to post the picture?
 - v. Do you think about how this picture will look on your feed?
10. How do you think that a person that only sees your Instagram posts without knowing you would describe you?
11. Do you think that this description would match your offline self as well?
12. Is your account private or public? Why?
13. How many followers do you have?
14. Approximately how many likes do you get on average?
15. How would it make you feel if on your next post you only got X (=half as many) likes?
16. Do you know how many people you are following?
17. How would you describe the accounts you follow? Please try to indicate out of 100% how many do you know personally (friends or acquaintances), how many are celebrities, how many are influencers?
 - a. How many of them do you know personally?
 - b. How many are public accounts of Celebrities or Influencers?
18. What kind of content do you follow?
19. What motivates you to follow somebody?
20. How do you think Instagram has influenced your life?

21. How would you feel if you were unable to log into Instagram for the next month?
22. Do you have any other comments you would like to add?
23. Can you please take out your phone, to check and tell me your actual screen time for the Instagram app in the past week?
24. How do you feel about spending this amount of time on the app?

Thank you for taking the time to be interviewed by me today.

IC: SCALES AND MEASURES - STUDY 2

| Constructs | Items | Measurement items | References |
|---|-------------|--|--|
| Real Self-Presentation (RS) | RS1 | I have a good sense of who I am, and many of the things I do on my Instagram profile is a way of showing that. | <i>(Michikyan, Subrahmanyam, & Dennis, 2014)</i> |
| | RS2 | Who I am online is similar to who I am offline. | |
| | RS3 | The way I present myself on Instagram is how I am in real life. | |
| | RS4 | I like myself and am proud of what I stand for and I show it on my Instagram | |
| | RS5 | I feel like I have many sides to myself and I show it on my Instagram profile. | |
| | RS6 | I change my photos on my Instagram profile to show people the different aspects of who I am. | |
| Ideal Self-Presentation (IS) | IS1 | I have a good sense of what I want in life and using Instagram is a way to express my views and beliefs. | <i>(Michikyan, Subrahmanyam, & Dennis, 2014)</i> |
| | IS2 | On Instagram I can tryout many aspects of who I am much more than I can in real life. | |
| | IS3 | I only show the aspects of myself on Instagram that I know people would like. | |
| | IS4 | I post things on my Instagram to show aspects of who I want to be. | |
| | IS5 | Who I want to be is often reflected in the things I do on my Instagram profile (e.g., status posts, comments, photos, etc.) | |
| False Self-Presentation (FS) | FS1 | I am a completely different person online than I am offline. | <i>(Michikyan, Subrahmanyam, & Dennis, 2014)</i> |
| | FS2 | Sometimes I feel like I keep up a front on Instagram. | |
| | FS3 | I compare myself to others on Instagram. | |
| | FS4 | I try to impress others with the photos I post of myself on my Instagram profile. | |
| | FS5 | I sometimes try to be someone other than my true self on Instagram. | |
| Narcissistic Self-Presentation (NS) | NS1 | I tend to post on Instagram to attract the interest of others. | <i>(Yu & Kim, 2020)</i> |
| | NS2 | I leave comments on Instagram to attract others' attention. | |
| | NS3 | I want to stand out on Instagram. | |
| | NS4 | I want to gain fame among my peers on Instagram. | |
| | NS5 | I want my posts to make me look cool among my peers on Instagram. | |
| Social Effect of Instagram Addiction (SIA) | SIA1 | How often do you prefer the excitement of Instagram instead of being with your close friends? | <i>(Kircaburun & Griffiths, 2018)</i> |
| | SIA2 | How often do you form new relationships with fellow Instagram users? | |
| | SIA3 | How often do you become defensive or secretive when anyone asks you what you do on Instagram? | |
| | SIA4 | How often do your grades or school-work suffers because of the amount of time you spend on Instagram? | |
| | SIA5 | How often do you snap, yell, or act annoyed if someone bothers you while you are on Instagram? | |
| | SIA6 | How often do you try to hide how long you've been on Instagram? | |
| | SIA7 | How often do you choose to spend more time on Instagram over going out with others? | |
| | SIA8 | How often do you feel depressed, moody or nervous when you are not on Instagram, which goes away once you are back on Instagram? | |

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| | SIA9 | How often do you try to cut down the amount of time you spend on Instagram and fail? | |
| | SIA10 | How often do you check your Instagram before something else that you need to do? | |
| | SIA11 | How often do you block out disturbing thoughts about your life with soothing thoughts of the Instagram? | |
| Compulsion of Instagram Addiction (CIA) | CIA1 | How often do you find yourself anticipating when you will go on Instagram again? | <i>(Kircaburun & Griffiths, 2018)</i> |
| | CIA2 | How often do you fear that life without the Instagram would be boring, empty, and joyless? | |
| | CIA3 | How often do you lose sleep due to late night log-ins to Instagram? | |
| | CIA4 | How often do you find yourself saying “just a few more minutes” when on Instagram? | |
| SISE | SISE | I have high self-esteem. | <i>(Robins, Hendin & Trzesniewski, 2001)</i> |
| Social Self-Esteem | SSE1* | I am worried about whether I am regarded as a success or failure. | <i>(Heatherton & Polivy, 1991)</i> |
| | SSE2* | I feel self-conscious. | |
| | SSE3 | I feel pleased with myself. | |
| | SSE4* | I am worried about what other people think of me. | |
| | SSE5* | I feel concerned about the impression I am making. | |
| | SSE6* | I am worried about looking foolish. | |
| Life Satisfaction | LS1 | In most ways, my life is close to my ideal. | <i>(Diener et al., 1985)</i> |
| | LS2 | The conditions of my life are excellent. | |
| | LS3 | I am satisfied with my life. | |
| | LS4 | So far I have gotten the important things I want in life. | |
| | LS5 | If I could live my life over, I would change almost nothing. | |

APPENDIX D: SAMPLE SPECIFICATIONS

D. 1 - Study 1

| Classification Questions | | Results |
|-------------------------------------|--------------|---------|
| Gender | Male | 35.0% |
| | Female | 65.0% |
| Age | 18 | 5.0% |
| | 19 | 0.0% |
| | 20 | 10.0% |
| | 21 | 5.0% |
| | 22 | 10.0% |
| | 23 | 25.0% |
| | 24 | 15.0% |
| | 25 | 0.0% |
| | 26 | 15.0% |
| | 27 | 5.0% |
| | 28 | 0.0% |
| | 29 | 10.0% |
| Nationality | Portuguese | 40.0% |
| | German | 30.0% |
| | Brazilian | 10.0% |
| | French | 5.0% |
| | Ukrainian | 5.0% |
| | Hungarian | 5.0% |
| | Bulgarian | 5.0% |
| Time Spent on Instagram (h/week) | ≤ 5 | 35.0% |
| | > 5 and < 10 | 30.0% |
| | ≥ 10 | 35.0% |

D.2 - Study 2

| Classification Questions | | Results |
|--------------------------|--------|---------|
| Gender | Male | 22.7% |
| | Female | 76.8% |
| Age | 18 | 3.8% |
| | 19 | 2.4% |
| | 20 | 8.5% |
| | 21 | 9.0% |
| | 22 | 17.1% |
| | 23 | 23.7% |
| | 24 | 10.0% |
| | 25 | 6.6% |
| | 26 | 4.3% |
| | 27 | 4.7% |
| | 28 | 2.8% |
| | 29 | 1.9% |
| | 30 | 5.2% |
| Nationality | German | 31.3% |

| | | |
|---|-------------------|-------|
| | Portuguese | 19.0% |
| | Luxembourgish | 10.4% |
| | Italian | 5.2% |
| | Dutch | 3.3% |
| | French | 2.8% |
| | Belgian | 2.8% |
| | American | 2.4% |
| | Columbian | 2.4% |
| | Others | 20.4% |
| Education Level | High school | 33.7% |
| | Bachelor's degree | 43.6% |
| | Master's degree | 20.4% |
| | Doctorate degree | 0.0% |
| | Other | 1,9% |
| Do you follow celebrities on Instagram? | Yes | 85,8% |
| | No | 14,2% |
| Do you follow influencers on Instagram? | Yes | 81,0% |
| | No | 19,0% |
| Type of accounts followed: | Family & Friends | 43% |
| | Acquaintances | 25% |
| | Celebrities | 11% |
| | Influencers | 11% |
| | Others | 11% |

APPENDIX E: RESULTS SPSS ANALYSIS – STUDY 2

E.1 – Regression Analysis Types of Accounts followed on Instagram Addiction

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error Of The Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .284 ^a | .080 | .063 | 1.08058 |

ANOVA^a

| Model | | Sum of Square | df | Mean Square | F | Sig. |
|-------|------------|---------------|-----|-------------|-------|-------------------|
| 1 | Regression | 21.053 | 4 | 5.263 | 4.508 | .002 ^b |
| | Residual | 240.536 | 206 | 1.168 | | |
| | Total | 261.589 | 210 | | | |

a. Dependent Variable: Average_Addiction

b. Predictors: (Constant), Others, Celebrities, Influencers, Acquaintances

Coefficients^a

| Model | | Unstandardized B | Coefficients Std. Error | Standardized Coefficients Beta | t | Sig. |
|-------|---------------|---------------------|----------------------------|--------------------------------------|--------|------|
| 1 | (Constant) | 2.692 | .210 | | 12.805 | .000 |
| | Acquaintances | .002 | .004 | .039 | .549 | .584 |
| | Celebrities | .010 | .009 | .080 | 1.135 | .284 |
| | Influencers | .027 | .008 | .248 | 3.468 | .001 |
| | Others | -.003 | .006 | -.039 | -.550 | .583 |

a. Dependent Variable: Average_Addiction

Excluded Variables^a

| Model | | Beta In | t | Sig. | Partial Correlation | Collinearity Statistics Tolerance |
|-------|------------------|----------------|---|------|------------------------|---|
| 1 | Friends & Family | . ^b | . | . | . | .000 |

a. Dependent Variable: Average_Addiction

b. Predictors in the Model: (Constant), Others, Celebrities, Influencers, Acquaintances

E.2 - Regression Analysis – Content of Accounts followed on Instagram Addiction

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error Of The Estimate |
|-------|-------------------|----------|-------------------|-------------------------------|
| 1 | .322 ^a | .104 | .050 | 1.08805 |

a. Predictors: (Constant), Others, Informative, Cars & Electronics, Art & Architecture, Music & Film, Comedy, Nature & Animal, Sport, Travel, Food, Lifestyle, Beauty & Fashion

ANOVA^a

| Model | | Sum of Square | df | Mean Square | F | Sig. |
|-------|------------|------------------|-----|----------------|-------|-------------------|
| 1 | Regression | 27.185 | 12 | 2.265 | 1.914 | .035 ^b |
| | Residual | 234.405 | 198 | 1.184 | | |
| | Total | 261.589 | 210 | | | |

a. Dependent Variable: Average_Addiction

b. Predictors: (Constant), Others, Informative, Cars & Electronics, Art & Architecture, Music & Film, Comedy, Nature & Animal, Sport, Travel, Food, Lifestyle, Beauty & Fashion

Coefficients^a

| Model | | Unstandardized B | Coefficients Std. Error | Standardized Coefficients Beta | t | Sig. |
|-------|--------------------|---------------------|----------------------------|--------------------------------------|--------|------|
| 1 | (Constant) | 2.666 | .331 | | 8.064 | .000 |
| | Art & Architecture | -.046 | .252 | -.013 | -.182 | .856 |
| | Beauty & Fashion | .587 | .185 | .263 | 3.173 | .002 |
| | Cars & Electronics | .101 | .409 | .017 | .248 | .804 |
| | Comedy | .140 | .199 | .055 | .707 | .481 |
| | Food | -.055 | .193 | -.022 | -.286 | .775 |
| | Informative | -.013 | .216 | -.005 | -.061 | .952 |
| | Lifestyle | .258 | .179 | .114 | 1.443 | .150 |
| | Music & Film | .138 | .230 | .049 | .600 | .549 |
| | Nature & Animals | -.253 | .237 | -.079 | -1.067 | .287 |
| | Sport | -.037 | .230 | -.013 | -.163 | .871 |
| | Travel | .152 | .180 | .066 | .847 | .398 |
| | Others | -.016 | .319 | -.004 | -.051 | .959 |

a. Dependent Variable: Average_Addiction

APPENDIX F: SMART PLS – PATH COEFFICIENT RESULTS – STUDY 2

F.1 - Direct Effects - Mean, STDEV, T-Values, P-Values

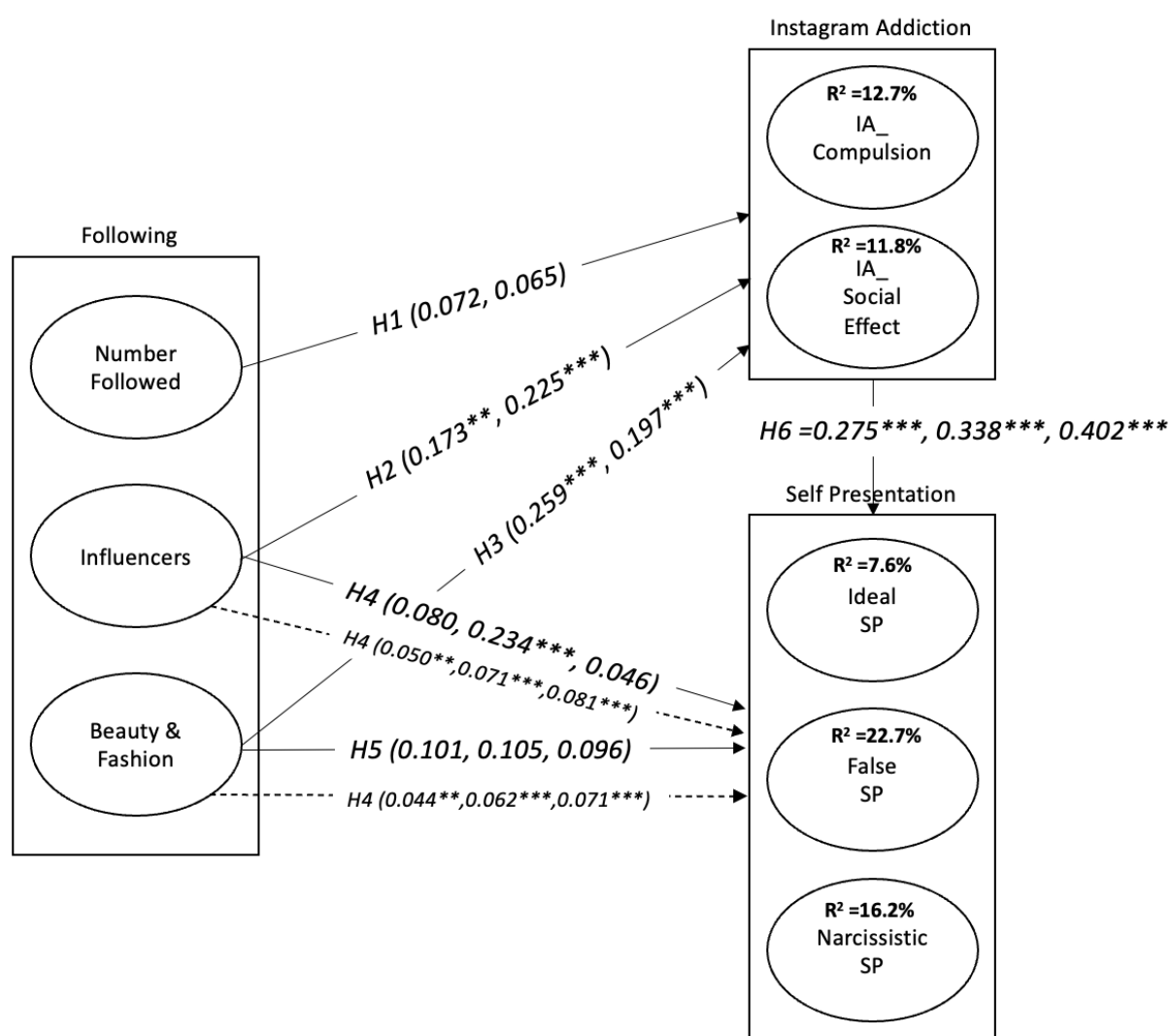
| | <i>Original Sample (O)</i> | <i>Sample Mean (M)</i> | <i>Standard Deviation (STDEV)</i> | <i>T Statistics (O/STDEV)</i> | <i>P Values</i> |
|--|--------------------------------|----------------------------|---|-------------------------------------|-----------------|
| Beauty & Fashion -> False SP | 0.105 | 0.100 | 0.069 | 1.517 | 0.129 |
| Beauty & Fashion -> IA_Compulsion | 0.259 | 0.263 | 0.070 | 3.677 | 0.000 |
| Beauty & Fashion -> IA_Social Effect | 0.197 | 0.198 | 0.065 | 3.059 | 0.002 |
| Beauty & Fashion -> Ideal SP | 0.101 | 0.102 | 0.074 | 1.357 | 0.175 |
| Beauty & Fashion -> Narcissistic SP | 0.096 | 0.091 | 0.077 | 1.243 | 0.214 |
| IA_Social Effect -> False SP | 0.316 | 0.336 | 0.065 | 4.856 | 0.000 |
| IA_Social Effect -> Ideal SP | 0.223 | 0.253 | 0.070 | 3.182 | 0.001 |
| IA_Social Effect -> Narcissistic SP | 0.361 | 0.389 | 0.072 | 4.993 | 0.000 |
| Influencers -> False SP | 0.234 | 0.232 | 0.065 | 3.620 | 0.000 |
| Influencers -> IA_Compulsion | 0.173 | 0.174 | 0.070 | 2.456 | 0.014 |
| Influencers -> IA_Social Effect | 0.225 | 0.227 | 0.073 | 3.095 | 0.002 |
| Influencers -> Ideal SP | 0.080 | 0.079 | 0.071 | 1.134 | 0.257 |
| Influencers -> Narcissistic SP | 0.046 | 0.040 | 0.074 | 0.620 | 0.535 |
| Number Followed -> IA_Compulsion | 0.072 | 0.086 | 0.074 | 0.979 | 0.328 |
| Number Followed -> IA_Social Effect | 0.065 | 0.075 | 0.081 | 0.811 | 0.417 |

F.2 - Indirect Effects - Mean, STDEV, T-Values, P-Values

| | <i>Original Sample (O)</i> | <i>Sample Mean (M)</i> | <i>Standard Deviation (STDEV)</i> | <i>T Statistics (O/STDEV)</i> | <i>P Values</i> |
|--|------------------------------------|----------------------------|---|-------------------------------------|-----------------|
| Beauty & Fashion -> False SP | 0.062 | 0.066 | 0.025 | 2.505 | 0.012 |

| | | | | | |
|---|-------|-------|-------|-------|--------------|
| <i>Beauty & Fashion -> Ideal SP</i> | 0.044 | 0.050 | 0.022 | 1.976 | 0.048 |
| <i>Beauty & Fashion -> Narcissistic SP</i> | 0.071 | 0.076 | 0.028 | 2.535 | 0.011 |
| <i>Influencers -> False SP</i> | 0.071 | 0.077 | 0.029 | 2.439 | 0.015 |
| <i>Influencers -> Ideal SP</i> | 0.050 | 0.058 | 0.026 | 1.930 | 0.054 |
| <i>Influencers -> Narcissistic SP</i> | 0.081 | 0.089 | 0.033 | 2.436 | 0.015 |

F.3 - Structural Equation Model including Indirect Significant Effects



Notes: Order of the path coefficients for Instagram Addiction: (IA_Compulsion, IA_Social Effect)

Order of the path coefficients for Self Presentation (Ideal SP, False SP, Narcissistic SP)

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

APPENDIX G: COMPLETE QUALTRICS QUESTIONNAIRE - STUDY 2

Start of Block: Default Question Block

Intro

Thank you for participating in this study!

This survey about Instagram contributes to the academic research and Master thesis of Klara Helene Müller, student at Universidade Nova IMS. Your answers will be recorded anonymously for data analysis purposes.

Since this survey is about your personal experience with Instagram, there are no right or wrong answers. Please just read to questions thoroughly and make sure to answer them to the best of your abilities and honestly.

You will take approximately 7 minutes to finish this survey.

Declaration I declare that I am 18 or over and agree to participate in this research. I declare that I was informed that my participation in this study is voluntary and that I can leave this survey at any time without penalty, and all data is confidential. I understand that I will evaluate responses and that this study does not offer serious risks.

- ☐ I agree to participate (1)
- ☐ I do not agree to participate (2)

Page Break

Active.filter Are you an active user of Instagram?

- ☐ Yes (1)
- ☐ No (2)

Page Break

*Time.spent.on.Inst*a Approximately how much time do you spend on Instagram per day on average?

- ☐ Less than 10min (1)
 - ☐ Between 10min and 30min (2)
 - ☐ Between 30min and 60min (3)
 - ☐ Between 1 hour and 2 hours (4)
 - ☐ Between 2 hours and 3hours (5)
 - ☐ Over 3 hours (6)
-

N.posts Approximately how many posts have you made on Instagram?

N.followers Approximately how many followers do you have on Instagram?

N.following Approximately how many accounts are you following on Instagram?

Celebs Do you follow Celebrities on Instagram?

- ☐ Yes (1)
 - ☐ No (2)
-

Influencers Do you follow Influencers on Instagram?

- ☐ Yes (1)
- ☐ No (2)
-

Type.following Indicate approximately the percentage of accounts you follow that are:
(Please make sure that the Total = 100)

Friends & Family : _____ (1)

Acquaintances : _____ (2)

Celebrities : _____ (3)

Influencers : _____ (4)

Others : _____ (5)

Total : _____

Content.following If you follow accounts of Influencers, Celebrities, Brands or Others, which of the following describe their content the best? (You can select up to three types of content)

- ☐ Art & Architecture (1)
- ☐ Beauty & Fashion (2)
- ☐ Cars & Electronics (3)
- ☐ Comedy (4)
- ☐ Food (5)
- ☐ Informative (6)
- ☐ Lifestyle (7)
- ☐ Music & Film (8)
- ☐ Nature & Animals (9)
- ☐ Sport (10)
- ☐ Travel (11)
- ☐ Others (12)
- ☐ Not applicable (13)

Self-presentation Please read the following statements carefully and use the scale to indicate how much you agree with them.

| | 1. Strongly disagree (1) | 2. (2) | 3. (3) | 4. (4) | 5. (5) | 6. (6) | 7. (7) | 8. (8) | 9. Strongly agree (9) |
|--|-----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------------|
| I sometimes try to be someone other than my true self on Instagram. (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am a completely different person online than I am offline. (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I post information about myself on my Instagram profile that is not true. (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have a good sense of who I am, and many of the things I do on my Instagram profile is a way of showing that. (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Who I am online is similar to who I am offline. (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have a good sense of what I want in life and using Instagram is a way to express my views and beliefs. (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The way I present myself on Instagram is how I am in real life. (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I like myself and am proud of what I stand for and I show it on my Instagram. (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel like I have many sides to myself and I show it on my Instagram profile. (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I change my photos on my Instagram profile to show people the different aspects of who I am. (10) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| | | | | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| On Instagram I can tryout many aspects of who I am much more than I can in real life. (11) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I only show the aspects of myself on Instagram that I know people would like. (12) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I post things on my Instagram to show aspects of who I want to be. (13) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I compare myself to others on Instagram. (14) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I try to impress others with the photos I post of myself on my Instagram profile. (15) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Who I want to be is often reflected in the things I do on my Instagram profile (e.g., status posts, comments, photos, etc.) (16) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sometimes I feel like I keep up a front on Instagram. (17) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I tend to post on Instagram to attract the interest of others. (18) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I leave comments on Instagram to attract others' attention. (19) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I want to stand out on Instagram. (20) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I want to gain fame among my peers on Instagram. (21) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I want my posts to make me look cool among my peers on Instagram. (22) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Addiction Please read the following statements carefully and use the scale to answer them truthfully.

| | | | | | | | | |
|----------|--------|--------|--------|--------|--------|--------|--------|---------|
| 1. Never | 2. (2) | 3. (3) | 4. (4) | 5. (5) | 6. (6) | 7. (7) | 8. (8) | 9. Alwa |
| (1) | | | | | | | | |

How often do you prefer the excitement of Instagram instead of being with your close friends? (1)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

How often do you form new relationships with fellow Instagram users? (2)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

How often do you become defensive or secretive when anyone asks you what you do on Instagram? (3)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

How often do your grades or school work suffers because of the amount of time you spend on Instagram? (4)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

How often do you snap, yell, or act annoyed if someone bothers you while you are on Instagram? (5)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

How often do you try to hide how long you've been on Instagram? (6)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

How often do you choose to spend more time on Instagram over going out with others? (7)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

How often do you feel depressed, moody or nervous when you are not on Instagram, which goes away once you are back on Instagram? (8)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

How often do you try to cut down the amount of time you spend on Instagram and fail? (9)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

How often do you check your Instagram before something else that you need to do? (10)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

How often do you block out disturbing thoughts about your

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Moderators Please read the following statements carefully and use the scale to indicate how much you agree with them.

life with soothing thoughts about Instagram? (11)

| | 1. Strongly disagree | 2. (2) | 3. (3) | 4. (4) | 5. (5) | 6. (6) | 7. (7) | 8. (8) | 9. Strongly agree (9) |
|---|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------|
| Please select "9. Always". (12) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How often do you find yourself anticipating when you will go on Instagram again? (13) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In most ways, my life is close to my ideal job? (14) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The conditions of my life due to excellent log-ins to Instagram? (15) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am satisfied with my life. (16) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How often do you find yourself saying "just a few more minutes" when on Instagram? (17) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| So far I have gotten the important things I want in life. (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| If I could live my life over, I would change almost nothing. (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am worried about whether I am regarded as a success or failure. (7)* | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel self-conscious. (8)* | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel pleased with myself. (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am worried about what other people think of me. (10)* | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel concerned about the impression I am making. (11)* | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am worried about looking foolish. (12)* | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Gender What is your gender?

- ☐ Male (1)
 - ☐ Female (2)
 - ☐ Other (3)
 - ☐ I prefer not to say (4)
-

Age What is your age?

Nationality What is your nationality?

Education What is the highest level of education that you have completed?

- ☐ High School (1)
- ☐ Bachelor (2)
- ☐ Master (3)
- ☐ Doctorate (4)
- ☐ Other (5) _____

End of Block: Default Question Block

